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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/620,109

07/15/2003

Alan Ray Albrecht

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INTELLECTUAL PROPERTY ADMINISTRATION

FORT COLLINS, CO 80527-2400

EXAMINER

SINKANTARAKORN, PAWARIS

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

07/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/620,109

Applicant(s)

ALBRECHT, ALAN RAY

Examiner

Pao Sinkantarakorn

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The amendment filed 4/26/2007 have been entered and made of record.
2. Claims 1-19 are pending.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-15 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Shankar et al. (newly cited US 2004/0066781).

Regarding claims 1, 11, and 19, Shankar et al. disclose a method of processing a packet sent to a provider network, the method comprising:

receiving the packet via a user port of an edge switch of the network, wherein the user port is an input port of the edge switch (see figures 2, 3, and paragraph 62, a packet is received at a customer subscriber port of a PE device PE1 or PE2, wherein each PE device includes a switch fabric module);

determining forwarding and routing by the edge switch based on a user VLAN identifier (VID) of a user VLAN tag for the packet (see paragraphs 63 and 64, once the packet is received, a customer VLAN ID can be identified from the packet, and an

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outgoing port bit map can be obtained from a look-up table after identifying the customer VLAN ID); and

double VLAN tagging by inserting a provider VLAN tag, including a provider VID, into the packet at a provider port of the edge switch prior to transmission of the packet via the provider port, wherein the provider port is an output port of the edge switch (see paragraphs 45, 67 and 68, a SP VLAN tag can be appended to the packet and then forwarded out of the uplink port to a service provider network (SPN), wherein the SP VLAN tag can identify the packet as belonging to a particular VPLS customer in the network);

regarding claim 2, further comprising forwarding and routing the packet by a middle switch based on the provider VLAN tag (see paragraphs 69 and 70);

regarding claim 3, the packet received includes a user VLAN tag, and the user VID is derived from the user VLAN tag (see paragraph 46);

regarding claim 4, the packet received does not include a user VLAN tag, and the user VID is assigned to be a port VID associated with the user port (see paragraphs 46, 64, and 70);

regarding claim 5, the provider VID comprises a VID of a destination VLAN (see paragraph 70);

regarding claim 6, the provider VID comprises a port VID associated with the input port (see paragraph 70);

regarding claim 7, the edge switch determines a class of service (COS) for the packet based on the user VLAN tag (see paragraph 65);

regarding claim 8, the edge switch determines a security action for the packet based on the user VLAN tag (see paragraph 65);

regarding claim 9, further comprising:

receiving the packet by a provider port of a second edge switch of the network (see paragraph 75); and

stripping the provider VLAN tag from the packet (see paragraph 75, a SP VLAN ID tag can be removed from the packet);

regarding claim 10, the packet is routed to more than one middle switch before arriving at the second edge switch (see paragraphs 37 and 38).

Regarding claim 12, Shankar et al. disclose a system for processing packets sent to a provider network, the system comprising:

a first switch configured to receive a packet via a user port, to determine routing and forwarding for the packet based on a user VID of a user VLAN tag (see paragraphs 63 and 64, once the packet is received, a customer VLAN ID can be identified from the packet, and an outgoing port bit map can be obtained from a look-up table after identifying the customer VLAN ID), and to insert a provider VLAN tag into the packet at a provider port prior to transmission of the packet such that the transmitted packet has at least two VLAN tags therein (see paragraphs 45, 67 and 68, a SP VLAN tag can be appended to the packet and then forwarded out of the uplink port to a service provider network (SPN), wherein the SP VLAN tag can identify the packet as belonging to a particular VPLS customer in the network); and

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a second switch configured to receive the packet having at least two VLAN tags via a provider port, to strip the provider VLAN tag from the packet at the provider port (see paragraphs 74 and 75, a customer VLAN ID is identified to obtain an outgoing port bit map and then a SP VLAN ID tag can be identified and removed from the packet at the uplink port of a double tagging engine module), and to determine routing and forwarding for the packet based on the user VID for the user VLAN tag (see paragraphs 72 and 73, once the packet is received at the uplink port, the customer VLAN ID can be identified and an outgoing port bit map can be obtained);

regarding claim 13, further comprising at least one middle switch communicatively coupled between the first and second switches (see paragraphs 37 and 38);

regarding claim 14, further comprising utilization of a class of service (COS) for routing and forwarding of the packet that is based on the user VID (see paragraph 65);

regarding claim 15, further comprising determining a security action for the packet based on the user tag (see paragraph 65).

5. Claims 16 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Srikanth et al. (US 6,430,621).

Regarding claim 16, Srikanth et al. disclose a method of routing and forwarding a packet (see column 4 lines 18-20) using double Q tagging (see column 3 lines 45-48, a tag is inserted in the MAC layer header of the packet; the IEEE 801.2Q committee's work in progress suggests the tag header be inserted immediately following the

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destination and source MAC address fields of a packet) to create a tunnel between a user port of a first switch and a user port of a second switch (see column 4 lines 22-24), wherein a user-expected service level is provided in relation to traffic flowing through the tunnel (see column 4 line 3, user priority field indicates the service level of each user e.g. high priority and low priority);

regarding claim 17, where the user-expected service level comprises a quality of service level for the traffic (see column 4 lines 3-4).

Claim Rejections - 35 USC § 103

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srikanth et al. in view of Dobbins et al. (US 5,825,772).

Regarding claim 18, Srikanth et al. disclose all the subject matter of the claimed invention except the method of determining a security action for the packet based on the user tag. The invention of Dobbins et al. from the same or similar fields of endeavor teach a method, wherein the user-expected service level comprises a security action for the traffic (see column 17 lines 29-31 and 35-36).

Thus, it would have been obvious to the person of ordinary skill in the art to implement the method and system, wherein the edge switch determines a security action for the packet based on the user tag of Dobbins et al. into the method and system for processing a packet of Srikanth et al.

The motivation for implementing the method and system, wherein the edge switch determines a security action for the packet based on the user tag is that it enhances the security level of the network.

Response to Arguments

10. Applicant's arguments with respect to claims 1-15 and 19 have been considered but are moot in view of the new ground(s) of rejection.

11. Applicant's arguments filed 4/26/2007 have been fully considered but they are not persuasive.

In the remarks, regarding claim 16, applicant argues that the recitation "using double Q tagging to create a tunnel... wherein a user-expected level is provided in relation to traffic flowing through the tunnel" overcomes the 102(e) rejection.

The examiner respectfully disagrees since the terms "double Q tagging" and "user-expected level" are not defined in the claim. Therefore, the examiner is entitled to interpret the terms as broad as possible to meet the claim limitations. The recitation "tagging a packet allows a packet to carry a VID" can be broadly interpreted as "double Q tagging." The recitation "a user priority field" is a field that provides the quality-of-service information, which can be broadly interpreted as user-expected level.

Therefore, in view of the above reasoning, the examiner believes that the 102(e) rejection is proper and should be sustained.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

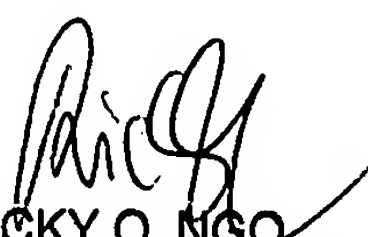
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pao Sinkantarakorn whose telephone number is 571-270-1424. The examiner can normally be reached on Monday-Thursday 9:00am-3:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PS

A handwritten signature in black ink, appearing to be "Pa" followed by a stylized flourish.A handwritten signature in black ink, appearing to be "Ricky Q. Ngo".

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER